

Trung-Dinh Han, Ph.D.

Director of Software Division, LogiGear

Former Senior Manager/Principal Engineer, Head of Cloud Platform, Samsung VN Mobile R&D Center

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SUMMARY

- He has eighteen years of software engineering and computer networks experience. He's now Director of Software Division, LogiGear for developing test automation tools and software development outsourcing projects on various frameworks/platforms (Reactjs, Android, iOS). Previously, He was playing as Technical Architect at CSC Vietnam (CSC) for developing outsourcing projects. Before joining CSC, he was a Principal Engineer at Samsung Vietnam Mobile R&D Center (SVMC), serving as Head of Cloud Platform department for developing B2C/B2B solutions running on multi-platform, such as Windows, MacOS, Android, and iOS. Especially, he had been leading Cloud based development (both backend & frontend) and managing AWS DevOps engineering teams. Moreover, he had experience in developing a hundred commercialized Android projects for South East Asia market. For academic experience, he received his Ph.D. degree from Department of Computer Engineering and Information Technology, University of Ulsan, South Korea at July, 2011. He was promoted as a research professor at the same department right after getting his Ph.D. . During the time at Korea, he had been working on several software & firmware development projects for Hyundai Heavy Industries.

PROFESSIONAL SKILLS

- **Database Management Systems:** MySQL, MS SQL, Oracle, MogoDB
- **Frameworks/ Platforms:** MFC, .Net Framework, J2EE, Struts, Spring, Django, AngularJS, Reactjs, Bootstrap, Hadoop/MapReduce, TinyOS, Android, iOS
- **IDEs:** MS Visual Studio, WebStorm, Eclipse, JCreator, JBuilder, Netbean, Xcode
- **Operating Systems:** Linux/Ubuntu, MS Windows, MacOS
- **Network Simulators:** NS2, NS3, QualNet
- **Programming Languages:** C, C++, Objective-C, C#, NesC, Python, HTML5, CSS3, XML, ASP, Java, Javascript, JSP, Assembly
- **Software Development Process:** Agile/Scrum
- **Management & Build Systems:** Perforce, SVN, Jira, Redmine, QuickBuild, Hudson, Jenkins
- **Cloud Services:** Amazon Web Service (AWS), Microsoft Azure, Salesforce
- **Embedded systems:** Circuit design and Microprogramming
- **Soft Skills:** Leadership, management, communication, presentation, interview, training

EDUCATION

- Ph.D., Department of Computer Engineering and Information Technology, School of Electrical Engineering, University of Ulsan, South Korea, 2011.
 - Thesis title: An Energy-Aware and Reliable MAC Protocol for Wireless Sensor Networks
- M.Eng., Dept. of Electrical and Electronic Engineering, Ho Chi Minh city University of Technology (HCMUT), Vietnam, 2002
 - Thesis title: Restoring motion picture sequences damaged by speckles, blotches, and scratches
- B.Eng., Dept. of Electrical and Electronic Engineering, Ho Chi Minh city University of Technology (HCMUT), Vietnam, 1999
 - Thesis title: Researching on web technologies for developing websites

HONORS - AWARDS

- To be promoted as Research Professor right after receiving Ph.D.
- Full scholarship of Ph.D. degree, the Department of Computer Engineering and Information Technology, University of Ulsan, South Korea, September 2008

PROFESSIONAL POSITIONS

7/2017 – Current:

- Director of Software Division, LogiGear

11/2016 – 7/2017:

- Technical Architect, Mobility Department, CSC Vietnam

3/2012 – 10/2016:

- Senior Manager/Principal Engineer, Head of Cloud Platform department, Samsung Vietnam Mobile R&D Center

8/2011 – 3/2012:

- Research Professor, Ubicom Laboratory, the Department of Computer Engineering and Information Technology, University of Ulsan, South Korea.

8/2008 – 8/2011:

- Research Assistant, Ubicom Laboratory, the Department of Computer Engineering and Information Technology, University of Ulsan, South Korea.

2000 - 2008:

- Head of the Department of Computer Systems, Information Technology Faculty, Ho Chi Minh city University of Industry (HUI)
- Lecturer, the Information Technology Department of the Douglas Mawson Institute of Technology, Australia (DMIT)
- Lecturer, FPT-APTECH Institute linked to India APTECH
- Lecturer, Electrical and Electronic Faculty, Ho Chi Minh city University of Technical Education
- Lecturer, Department of Telecommunication, University of Transport and Communications
- Working part-time for V.Tien Company. The author of Vietkibo driver (a product of Bee-Next company launched at the beginning of 2006)
- Lecturer, the Center of IT Research and Development, Ho Chi Minh National University (CITD)

1999 – 2000

- Software designer of TMA Software Solutions

PROFESSIONAL EXPERIENCE AT LOGIGEAR

Director of Software Division, LogiGear

07/2017 – Current

[Working on TestArchitect Product]

07/2017 - current

- **Description:** LogiGear are running their business based on a strategic product named TestArchitect, which is a codeless test automation framework. The core concept of this framework is Action Based Testing, which allows non-engineer guys writing automation scripts, reducing testing cost.
- **Responsibilities:**
 - Developing software outsourcing projects
 - Developing a new architect for TestArchitect product to adapt with cloud based technologies and easy maintenance
 - Providing pre/post sale services for Test Architect product
 - Building DevOps (CI/CT/CD) for TestArchitect product development
- **Accomplishments:**
 - Developing localization outsourcing projects
 - Proposed a new TestArchitect product
 - Maintaining current TestArchitect product
 - Building a software architect team
 - Researching AI/machine learning for test automation and BlockChain for outsourcing projects

Technologies: Java, C++, Webdriver, Automation Technologies

PROFESSIONAL EXPERIENCE AT CSC VIETNAM

Technical Architect, CSC Vietnam

11/2016 – 7/2017

[Working on SAM (Software Application Management) Project]

11/2016 – 7/2017

- **Description:** Manulife would like to develop SAM application to manage customers' profiles and behaviors. Based on customer data, marketing team analyses business trend and then come up with new marketing strategies.
- **Responsibilities:**
 - Working as scrum master as well as technical architect
- **Accomplishments:**
 - Deliver the application for 6 countries (Vietnam, Indonesia, Singapore, Cambodia, Malaysia, Philippines)
 - Modifying the application architect to apply multiple languages
 - Refactoring application source code

Technologies: Ionic, AngularJS

[Working on MOVE project]**02/2017 – Current**

- **Description:** Manulife is developing MOVE application on mobile devices (Android & iOS) which communicates with Fitbit/Misfit/Apple Watch to get health data for supporting and giving awards for customers who achieve best records
- **Responsibilities:**
 - Working as scrum master as well as technical architect
- **Accomplishments:**
 - Developing patches for maintenance release

Technologies: Android, iOS, Salesforce SDK, Salesforce**PROFESSIONAL EXPERIENCE AT SAMSUNG MOBILE R&D CENTER****Senior Manager/Principal Engineer, Samsung Vietnam Mobile R&D Center****3/2012 – 10/2016****[Working on Cloud Platform]****06/2013 - current**

- **Description:** Cloud 24/7 services operation and Cloud based solutions development are hot topics of Samsung Mobile to turn on the future of Samsung smartphone. We are deploying B2B solutions to work on Cloud as well as utilizing big data on cloud to provide valued services
- **Responsibilities:**
 - Working as Development Project leader as well as technical leader for B2B Cloud projects
 - Training members about AWS, System operation, Python, Django, MySQL, Spring framework
- **Accomplishments:**
 - Developing and maintaining Cloud solutions, such as Knox service, printing service, location based service, Knox diagnostic tools, SHealth, STranslator...
 - Developing mobile solutions on Android/iOS, such as Smart Conference Call, Hypervisor, Samsung School projects
 - Operating Samsung servers on AWS for 24/7 services
 - Building up 4 teams (BackEnd, FrontEnd, Cloud Infra, System operation) upto 80 engineers
 - Training members about Amazon services, such as EC2, S3 ELB, IAM, CloudFront, Cloud Trail, Cloud Watch, ECS, Docker

Technologies: AWS, Azure, Spring, AngularJS, Bootstrap, Python, Django, MySQL, MogoDB, Android, iOS**[Working on B2C & B2B solutions]****11/2012 – 02/2016**

- **Description:** After building up software commercialized team, Samsung Vietnam Mobile R&D center has been trying to extend their scope to develop killer applications and B2B solutions which run on Samsung mobile devices
- **Responsibilities:**
 - Developing B2C & B2B solutions which support for selling Samsung mobile devices

- Training members about Windows programming (MFC, .Net, WPF), Android, iOS, MacOS, Web development as well as protocols, such as MTP, Mobex
 - **Accomplishments:**
 - Developing and maintaining B2C solutions, such as Spen SDK, Snote, Gear Fit, Kies, SmartSwitch, SideSync, eMeeting, SoundTailor, KiesCast, PhotoEditor
 - Developing and maintaining B2B solutions, such as Samsung School, Smart Conference Call
 - Developing solutions related to image filtering and enhancement
 - Filling 2 patents related to hearing aid solutions and Samsung keyboard
 - Built up B2C & B2B teams can work on multi-platform, such as Windows, Mac, Android, iOS (upto 200 engineers)
- Technologies:** Android, iOS, MacOS, Windows, MTP, Chord SDK, SPen SDK

[Working on Android System and Framework]

03/2012 - 02/2013

- **Description:** Samsung Mobile built an R&D center in Vietnam to support their Mobile Manufactory at 2012. They aim at developing Android smartphone for South East Asia (SEA). So, they need to build Android System & Framework teams to develop and maintain applications for Android smartphone
 - **Responsibilities:**
 - Working as Development Project leader as well as technical leader for SEA projects
 - Training Android System and Framework teams to work on Samsung Smartphone Android projects for South East Asia
 - **Accomplishments:**
 - Delivering Android applications for SEA
 - Building up Android System and Framework teams upto 100 engineers
 - Building up Advanced Technology team to cowork with Hanoi University of Science & Technology for collaboration projects
 - Stabilizing software development processes and build systems
- Technologies:** Android

PROFESSIONAL EXPERIENCE AT THE UBIQUITOUS COMPUTING LAB, UNIVERSITY OF ULSAN, SOUTH KOREA

Development of USN communication protocol and USN sensor device for safety-critical industry

Group leader

06/2010 – 03/2012

- **Description:** People and their properties are invaluable assets in society. However, workers may lose their lives due to unpredictable accidents, such as explosion, fire, suffocation by smoke or poisonous gas in industrial work areas, and thus safe work environments are critical for workers. Some safety applications were developed for ensuring safety in the shipbuilding areas in Hyundai Heavy Industries Co., Ltd. (HHI); however, these applications could not handle the issues of low power consumption and reliable communication because of lacking reliable and energy efficient communication protocols.

We aim at designing a new MAC protocol that supports reliable communication and efficient energy management in terms of low power and balanced energy consumption throughout the network.

- **Responsibilities:**
 - Teaching some courses, such as Real-time computing, Wireless sensor networks, and Topics on Personal Communication Networks
 - Designing a new sensor MAC protocol named Industry-MAC (I-MAC)
 - Implementing the I-MAC on the Qualnet Network Simulator version 5.0.2 to verify the correctness of the I-MAC
 - Implementing the I-MAC on TelosB mote (a Berkeley mote family) by using TinyOS
 - Writing the project reports
 - Publishing the works to some international SCI journals
 - Making research schedules for other graduated students using Microsoft Project
 - Training new students how to program on the Qualnet Network Simulator
- **Accomplishments:**

He proposed the I-MAC protocol that far outperforms some existing protocols in overall. The I-MAC not only can deal with mobile sensor environments, but also it saves and balances network energy consumption. Especially, the network lifetime is expanded from 2 weeks to 4 months. He published some papers related to the project to some SCI journals as follows:

 - T.D. Han, H. Oh, “I-MAC Protocol For Wireless Sensor Networks in Safety-Critical Industry Fields,” (on processing)
 - H. Oh, T.D. Han, “A Demand-Based Slot Assignment (DSA) Algorithm for Efficient and Reliable Data Communication in Wireless Sensor Networks,” ACM/Springer Wireless Networks (WINET), Vol. 18, No. 5, pp 523 – 534, July, 2012 [SCI]
- **Technologies:** QualNet Network Simulator, TelosB, TinyOS, C, C++, NesC

Development of communication protocols for Mobile IP support of mobile ad hoc networks (MANETs)

Designer

08/2008 – 06/2010

- **Description:** MANETs have a broad range of applications due to their simple management and deployment. However, they are not applicable to areas in which the mobile nodes (MNs) of a MANET need either Internet access or communication with the MNs in other distant MANETs. In infrastructure-based wireless networks that consist of base stations or Internet gateways (IGs) and MNs, the IG has to manage the mobility of the MNs in order to provide them with access to the Internet. Many researches focused on devising a mobility management scheme by adopting one of the existing protocols for MANET routing. The effectiveness of such mobility management schemes is limited since they use flooding for mobility management. Furthermore, if both mobility management and routing use flooding, the performance will be worsen, due to the increased control overhead caused by two sources of flooding. Thus, communication protocols for Mobile IP Support of Mobile Ad Hoc Networks are essential.
- **Responsibilities:**
 - Designing routing protocols and mobility management protocols for Mobile IP support of MANETs
 - Implementing the proposed protocols on the Qualnet Network Simulator version 3.9 to verify the correctness of the proposed protocols
 - Publishing the works to some international SCI journals
- **Accomplishments:**

He proposed some protocols that far outperform some existing protocols. The new protocols were published to some international SCI journals and conferences as follows:

Journals:

- T.D. Han, H. Oh, "Quasi-Tree Mobility Management for Internet Connectivity of Mobile Ad Hoc Networks," ACM/Springer Wireless Networks (WINET), vol. 17, no. 2, pp. 493 – 506, February 2011, DOI: 10.1007/s11276-010-0293-8, <http://www.springerlink.com/content/r4672887745x1u23/> [SCI]
- T.D. Han, H. Oh, "A Looping Problem in the Tree-Based Mobility Management for Mobile IP Supported Ad Hoc Networks," the Journal of Communications and Networks (JCN), vol. 13, no. 4, pp. 385-392, October 2011 [SCI]
- T.D. Han, H. Oh, "Detecting and Resolving a Loop in the Tree-Based Mobility Management," Springer-Verlag, LNCS 6104, pp. 583-592, May 2010, DOI: 10.1007/978-3-642-13067-0_60 [LNCS]
- T.D. Han, H. Oh, "A Topology Management Routing Protocol for Mobile IP Support Mobile Ad Hoc Networks," Springer-Verlag, LNCS 5793, pp. 341-346, September 2009, DOI: 10.1007/978-3-642-04383-3_25 [LNCS]
- T.D. Han, H. Oh, "Mobility Management Using Virtual Multi-Parent Tree in Infrastructure Incorporated Mobile Ad Hoc Networks," Springer-Verlag, LNCS. 5787, pp. 82 – 91, September 2009, DOI: 10.1007/978-3-642-04492-2_9 [LNCS]

Conferences:

- T.D. Han, H. Oh, "Detecting and Resolving a Loop in the Tree-Based Mobility Management," the 5th International Conference on Grid and Pervasive Computing, GPC2010, Hualien, Taiwan, pp. 583-592, May 2010 (acceptance rate = 36.4%)
 - T.D. Han, H. Oh, "A Topology Management Routing Protocol for Mobile IP Support Mobile Ad Hoc Networks," the 8th international conference on ad hoc networks and wireless, Ad Hoc Now 2009, Murcia, Spain, pp. 341-346, September 2009 (acceptance rate = 37%)
 - T.D. Han, H. Oh, "Mobility Management Using Virtual Multi-Parent Tree in Infrastructure Incorporated Mobile Ad Hoc Networks," 12th Asia-Pacific Network Operations and Management Symposium, APNOMS 2009, Jeju Island, South Korea, pp. 82 – 91, September 2009 (acceptance rate = 23.7%)
- **Technologies:** QualNet Network Simulator, C, C++

Development of a power saving electronic socket

Supervisor

10/2008 – 10/2009

- **Description:** Electronic devices can be turned off by using remotes, such as televisions, amplifiers, DVD players. However, these devices go into standby status, and thus they still consume some energy. We aimed at designing a socket that can cut off electric current from a device which is turned off. This project was supported by INCA Solution Co., Ltd. (website: <http://www.checktap.com/>)
- **Responsibilities:**
 - Supervised Korean students to design a power saving electronic socket
- **Accomplishments:**
 - We developed a power saving electronic socket

Technologies: PIC16, C

PRIOR WORKING EXPERIENCE

V.Tien Company

Designer

01/2003 - 12/2006,

- **Description:** There are two popular typing styles in Vietnam: Telex and Vni. We aimed at designing a new keyboard and a new keyboard driver which allows to combine Telex and Vni typing styles
- **Responsibilities:**
 - Designing a new combined typing style
 - Developing a keyboard driver named Vietkibo
- **Accomplishments:**
 - Developed Vietkibo driver for a special keyboard(a product of Bee-Next company launched at the beginning of 2006)
- **Technologies:** C, C++

TMA Solutions

Software Designer

08/1999 - 08/2000,

- **Description:** The M1 PBX of Nortel generated some bugs, so we aimed at designing a software that can test the M1 automatically
- **Responsibilities:**
 - Developing a software to test M1 PBX of Nortel by using WinRunner
- **Accomplishments:**
 - Developed the software that can test the M1 PBX of Nortel by using WinRunner
- **Technologies:** TSL, WinRunner

Ho Chi Minh City University of Industry,

Head of Computer Systems Department

01/2006 - 08/2008

- **Description:** Designing IT courses for Computer Systems Department that equip students with essential knowledge of computer networks and computer architecture. Furthermore, we aimed at developing an online examination system
- **Responsibilities:**
 - Designing IT courses for the Computer System Department
 - Training and advising IT projects for students
 - Assigning IT courses for lecturers
 - Recruiting IT lecturers
- **Accomplishments:**
 - Designed IT courses for Computer System Department, HCMC University of Industry
 - Designed computer networks for the Information Technology Faculty
 - Developed an online examination system
- **Technologies:** Struts framework, JSP, Servlet

Lecturer**09/2000 - 01/2006**

- **Description:** Teaching some IT courses for Computer Systems Department to equip students with essential knowledge of computer networks and computer architecture.
- **Responsibilities:**
 - Teaching IT courses for FPT-APTECH
 - Training and advising IT projects for students
- **Accomplishments:**
 - Taught some courses such as C/C++, VB, Java, Computer Hardware, Install and Configuration Software, Digital Signal Processing, Electronic Circuits, Digital Design, Computer Architecture & Assembly, Computer Networks, Operating Systems, Technical English
- **Technologies:** Electronic design, Network design

FPT-APTECH**Lecturer****08/2003 - 08/2008**

- **Description:** Teaching IT courses for FPT-APTECH that links to India APTECH and advising students to do eProjects with co-advisors at India.
- **Responsibilities:**
 - Teaching IT courses for FPT-APTECH
 - Training and advising IT projects for students
- **Accomplishments:**
 - Taught some courses such as C/C++, HTML, JavaScript, ASP, Access, MS SQL Server 2000, Core Java, Adv Java, XML, JSP, Servlets, EJB, J2EE framework
 - Developed some online shopping websites using ASP and JSP
 - Developed some games that run on LANs using Java
- **Technologies:** ASP, JSP, Java

Douglas Mawson Institute of Technology (DMIT), Australia,**Lecturer****08/2001 - 08/2008**

- **Description:** Teaching IT courses for DMIT that links to the HCMC University of Industry and advising students to do projects.
- **Responsibilities:**
 - Teaching IT courses for DMIT
 - Training and advising IT projects for students
- **Accomplishments:**
 - Taught some courses such as C/C++, UML, OOAD, Java Programming Part A, Java Programming Part D, Install and Configuration Software, Computer Networks, Computer Fundamentals, System Maintenance
 - Developed some online shopping websites using JSP

Technologies: JSP, Java

CERTIFICATION & TRAINING

- AWS technical essentials, architecting on AWS, and system operation on AWS courses, Hanoi, Vietnam, 2014
- Java and Android courses, Samsung Electronics, Noida, India, 2012
- Object Oriented Analysis & Design and Database Management, The Center for Development of Advanced Computing, Noida (CDAC, Noida), India, 2006

REFEREES: Available upon request